

09751788 10-21-05

Cope

IFW

Express Mail Label No.

Dated: _____

Docket No.: 04303/100N150-US1
(PATENT)

OCT 19 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
Ravi Subramanian

Patent No.: 6,934,319

Issued: August 23, 2005

For: A CONFIGURABLE MULTIMODE
DESPREADER FOR SPREAD SPECTRUM
APPLICATIONS

RECEIVED

OCT 27 2005

OFFICE OF PETITIONS

**REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.322 AND CFR 1.323**

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted several Patent office errors which should be corrected.

The following errors were not in the application as filed by applicant:

In the Application:

Column 1, Line 19 (Approx.), Delete "SEAR" and insert -- SEARCH --.

Column 16, Line 52 (Approx.), Delete "ΣE" and insert - - Σ - -.

Column 23, Line 49 (Approx.) In Claim 46, delete "of;" and insert -- of: --.

10/21/2005 NNGUYEN1 00000117 6934319

01 FC:1811

100.00 DP

Repln. Ref: 10/21/2005 NNGUYEN1 0013450400
DOR: 040100 Name/Number: 6934319
FC: 9204 \$130.00 CR

{W:\04303\100N150000\00551079.DOC [REDACTED] }

Enclosed please find marked up copies of page 1 of the specification, page 22 of the specification and page 10 of the claims.

The following errors were found in the application as filed by applicant. The errors now sought to be corrected are inadvertent typographical errors, the correction of which does not involve new matter or require reexamination.

Column 11, Line 58 (Approx.) Delete "N((a))" and insert - - N(a) - -.

Column 19, Line 55 (Approx.) In Claim 5, delete "(1-code)" and insert - - (I-code) - -.


Column 23, Line 50 (Approx.) In Claim 46, delete "(1-code)" and insert - - (I-code) --.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

The Commissioner is authorized to charge any deficiency of up to \$300.00 or credit any excess in this fee to Deposit Account No. 04-0100. Enclosed please find a check for \$230.00.

Dated: October , 2005

Respectfully submitted,

By 
Flynn Barrison

Registration No.: 53,970
DARBY & DARBY P.C.
P.O. Box 5257
New York, New York 10150-5257
(212) 527-7700
(212) 527-7701 (Fax)
Attorneys/Agents For Applicant

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 6,934,319
APPLICATION NO. : 09/751,785
ISSUE DATE : August 23, 2005
INVENTOR(S) : Ravi Subramanian

RECEIVED
OCT 27 2005
OFFICE OF PETITIONS

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Application:

Column 1, Line 19 (Approx.), Delete "SEAR" and insert -- SEARCH --.

Column 11, Line 58 (Approx.) Delete "N((a))" and insert - - N(a) - -.

Column 16, Line 52 (Approx.), Delete "ΣE" and insert - - Σ - -.

**Column 19, Line 55 (Approx.) In Claim 5, delete "(1-code)" and insert
- - (I-code) - -.**

Column 23, Line 49 (Approx.) In Claim 46, delete "of;" and insert -- of: --.

**Column 23, Line 50 (Approx.) In Claim 46, delete "(1-code)" and insert
- - (I-code) --.**



CONFIGURABLE MULTIMODE DESPREADER FOR SPREAD SPECTRUM
APPLICATIONS

RECEIVED

OCT 27 2005

OFFICE OF PETITIONS

5

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority to the provisional patent application with the following Serial Number: 60/173,634, filed on December 30, 1999.

Related applications, which are incorporated herein by reference, are:

10

A CONFIGURABLE ALL-DIGITAL COHERENT DEMODULATOR SYSTEM FOR
SPREAD SPECTRUM APPLICATIONS

Serial No. To Be Assigned, Attorney Docket No. 9824-0037-999

15 APPARATUS AND METHOD FOR CALCULATING AND IMPLEMENTING A
FIBONACCI MASK FOR A CODE GENERATOR

Serial No. To Be Assigned, Attorney Docket No. 9824-0032-999

A FAST INITIAL ACQUISITION & SEARCH DEVICE FOR A SPREAD SPECTRUM
20 COMMUNICATION SYSTEM

Serial No. To Be Assigned, Attorney Docket No. 9824-0033-999

A CONFIGURABLE CODE GENERATOR SYSTEM FOR SPREAD SPECTRUM
APPLICATIONS

25 Serial No. To Be Assigned, Attorney Docket No. 9824-029-999

METHOD AND APPARATUS TO SUPPORT MULTI STANDARD, MULTI SERVICE
BASE-STATIONS FOR WIRELESS VOICE AND DATA NETWORKS

Serial No. To Be Assigned, Attorney Docket No. 9824-0035-999

30

IMPROVED APPARATUS AND METHOD FOR MULTI-THREADED SIGNAL
PROCESSING

Serial No. 09/492,634, filed on January 27, 2000

35 Except for application Serial No. 09/492,634, all of the above applications are filed
simultaneously herewith.

observation length A value in one embodiment. That is, enable input B 114b occurs after observation length A value 114a has enabled accumulate and dump circuits 261 and 262 to communicate real and imaginary dumped samples 5112a and 5112b to interface 258 in Figure 2B. Thus, the present invention can adaptively update observation lengths for

5 despreading dynamically with minimal lag in one embodiment. The dumped output from step 5118 is represented mathematically as:

$$\Sigma[(\text{Dumped Real sample} + \text{Dumped Imaginary sample})] \quad [3]$$

In equation [3], observation A was from accumulate and dump circuit 261 and observation

10 B is from accumulate and dump circuit 262. Following step 5118, flowchart 5100 ends.

The groupings, or accumulation, of data from steps 5102 to 5118 and as implemented in multiplier circuits 271-274, accumulate and dump circuits 261-264, and interface circuits 258-259, can be classified in a hierarchical order. This hierarchical order

15 can include any span of the following groupings. First, multiple individual chips can be grouped to form a symbol, and multiple symbols can be grouped to form a data field, and multiple data fields can be grouped to form a slot, and multiple slots can be grouped to form a frame. For example, N chips can equal M symbols which can equal L fields, where $N > M > L$, in one embodiment.

20

Table 1 provides an exemplary implementation where a received data sample and a received code sample (C) are repeated for two iterations for every observation (Obs.). Table 1 also indicates how a first accumulate operation occurs for length A of two observations; and how a second accumulate operation occurs for length B of two accumulate A results. In

25 contrast, Table 2 provides a different example of accumulation operations. The present invention is well suited to a wide range of such hierarchical and configurable length accumulate operations.

Table 1. Hierarchy of accumulation operations

30

Accumulate B							
Accumulate A				Accumulate A			
Obs		Obs		Obs		Obs	
C	C	C	C	C	C	C	C

35 Table 2. Alternative hierarchy of accumulation operations

Accumulate B'							
Accumulate A'				Accumulate A'			

Claim 43 (Original): The method recited in Claim 41 further comprising the steps of:

- m) receiving an in-phase code chip (I-code) at an additional multiplier;
- n) receiving the in-phase data sample (I-sample) at the additional multiplier; and
- o) multiplying the I-code with the I-sample, via the additional multiplier, to produce an additional observation.

Claim 44 (Original): The method recited in Claim 43 further comprising the steps of:

- p) repeating in parallel, steps i) through k) for the additional observation at an additional accumulate and dump circuit to dump an additional accumulated sample.

Claim 45 (Original): The method recited in Claim 44 further comprising the steps of:

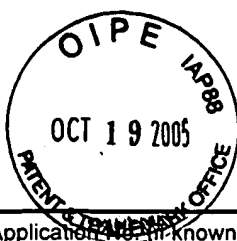
- q) receiving the accumulated sample from the accumulate and dump circuit at an interface circuit;
- r) receiving the additional accumulated sample from the additional accumulate and dump circuit at the interface circuit;
- s) receiving a second control signal at the interface circuit that enables the accumulated sample and the additional accumulated sample to be transmitted as a symbol; and
- t) repeating steps q) through s) for a new symbol.

Claim 46 (Original): The method recited in Claim 45 further comprising the steps of:

- u) repeating in parallel steps a) through w) on a parallel set of components wherein step g) receives the in-phase code chip (I-code) at the multiplier, wherein step m) receives the quadrature-phase code chip (Q-code) at the additional multiplier, and wherein step n) receives the quadrature-phase data sample (Q-sample) at the additional multiplier.

Claim 47 (Presently Amended): A method of configurably despread a spread spectrum signal, the method comprising:

- a) receiving a first observation from a first multiplier at a despread;
- b) accumulating the first observation at a first accumulate and dump circuit;



Application (Unknown): 09/751,785

Attorney Docket No.: 04303/100N150-US1

Certificate of Express Mailing Under 37 CFR 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Airbill No. _____ in an envelope addressed to:

2692131978-US

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on October 19, 2005
Date

RECEIVED

OCT 27 2005

OFFICE OF PETITIONS

Signature

Typed or printed name of person signing Certificate

Registration Number, if applicable

Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Certificate of Correction (1 page)
Request for Certificate of Correction (2 pages)
Copy of page 1 of the Specification (1 page)
Copy of page 22 of the Specification (1 page)
Copy of page 10 of the claims (1 page)
Check for \$230.00
Return Postcard